

12-21-2022

Implementing DEI in Aviation Education: Coping and Addressing Mental Health Concerns

Jorge L. D. Albelo Ph.D.
Embry-Riddle Aeronautical University, diazalb@erau.edu

Michael F. O'Toole Ph.D.
Embry-Riddle Aeronautical University, otoolem@erau.edu

Samantha Bowyer
Embry-Riddle Aeronautical University, samantha.bowyer@erau.edu

Follow this and additional works at: <https://commons.erau.edu/publication>



Part of the [Aviation and Space Education Commons](#)

Scholarly Commons Citation

Albelo, J. L. D., O'Toole, N., & Bowyer, S. (2022). Implementing DEI in aviation education: Coping and addressing mental health concerns. *Collegiate Aviation Review International*, 40(2), 197–204.
<http://ojs.library.okstate.edu/osu/index.php/CARI/article/view/9404/8439>

This Conference Proceeding is brought to you for free and open access by Scholarly Commons. It has been accepted for inclusion in Publications by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.

12-21-2022

Implementing DEI in Aviation Education: Coping and Addressing Mental Health Concerns

Jorge L. D. Albelo
Embry-Riddle Aeronautical University

Nicola O'Toole
Embry-Riddle Aeronautical University

Samantha Bowyer
Embry-Riddle Aeronautical University

In recent years, different global events have led to increased awareness of the benefits of promoting diversity, equity, and inclusion in the workplace and education. Notably, the aviation industry is seeing increased research initiatives to promote DEI among all generations. Nevertheless, given the rising concerns about mental health in higher education, this paper sought to connect coping and addressing mental health through implementing DEI teachings in aviation education. Integrating DEI in the aviation classroom can be challenging, as many faculty members might feel uncomfortable addressing the topic in their courses. Consequently, the researchers proposed and tested an aviation education approach incorporating Talking, Teaching, Tools, and Taking Care to facilitate the capstone course for graduating seniors in Aeronautical Science. Therefore, this research focused on incorporating mental health into teaching diversity, equity, and inclusion in aviation education through research-based practices.

Recommended Citation:

Albelo, J. L. D., O'Toole, N. & Bowyer, S. (2022). Implementing DEI in aviation education: Coping and addressing mental health concerns. *Collegiate Aviation Review International*, 40(2), 197-204. Retrieved from <http://ojs.library.okstate.edu/osu/index.php/CARI/article/view/9404/8439>

Higher Education Mental Health Crisis

It is no secret that there is an ongoing mental health crisis across higher education. Over the last several years, many events have pushed mental health to its limit. Many people navigating these uncertain times are in college and have their worldviews challenged. Attending college can be demanding enough without these additional stressors. However, when it comes to those who seek mental health care and those who do not, some stark statistics point to the underutilization of resources by racial and ethnic groups. A large meta-analysis by Smith and Trimble (2016) found that compared to European-Americans, African-Americans, Hispanics and Latinxs, and Asian-Americans were 21%, 25%, and 51% less likely to use mental health services.

There has been a significant amount of research on the race and ethnic background of those who seek mental/emotional help. The national healthy minds survey (Lipson et al., 2022) identified the most prominent degradation in mental health among the American Indian/Alaskan Native student population. The lowest rate of mental health service utilization was for students of color. In the past year, the highest utilization rate of mental health services by Asian, Black, and Latinx students was at or below the lowest utilization rates for White students (Lipson et al., 2022). A study by Leath and Jones (2022) looked specifically at Black college students at predominantly white and minority-serving institutions. Leath and Jones (2022) found that Black students who found an institution to be welcoming and inclusive reported better mental health and less anxiety. They also found that representation matters in mental health counseling; this study focused on Black students who saw a lack of Black counselors as a barrier to getting help due to a lack of shared background or experience.

For many students, college is the first time they are solely responsible for their physical and mental health without the support of a parent or guardian. Coarossi (2022) points out that most mental health problems onset or are discovered by the age of 24. Since college is a crucial developmental time for young adults, it is not surprising that there has been increased attention to mental health in the college-age population in research and outreach. For example, Abdu-Glass et al. (n.d.) found that half of the college students had a psychiatric disorder (e.g., depression, social anxiety, distress, eating disorders) in 2021, 73% of students experienced some mental health crisis, and almost one-third of college students reported feeling so depressed that they had trouble functioning. Furthermore, only 25% of students with mental health problems seek help (Abdu-Glass, n.d.).

Current data suggests a spike in mental health issues over the last year or two might be related to the Covid-19 pandemic and other local and global issues that have threatened the mental health of our college-age population. However, Lipson et al. (2022) showed that college-age students have been experiencing a decline in mental health for the last eight years. Similarly, the national healthy minds study (2022) found a 135% increase in depression and a 110%

increase in anxiety between 2013 and 2021. Moreover, from 2013 to 2021, the number of students doubled that met the criteria for one or more mental health problems.

Colleges and universities have many options for supporting and fostering a healthy mental health climate on campus. Each of these options comes with its unique challenges. Current research supports increasing the number of diverse counselors (which includes race, gender, age, life experiences, etc.) to ensure students feel represented and comfortable sharing around individuals with similar life experiences (Colarossi, 2022; Leath & Jones, 2022). Furthermore, mental health services should be affordable to all students seeking counseling; peer counseling has been shown to be an effective method to leverage in order to help reduce the cost as well as reduce the stigma of seeking mental health care. (Abdu-Glass, E., Schlozman, S., & Beresin, G., n.d.). According to Abdu-Glass et al. (n.d.), one emerging challenge for colleges is the growth in demand for counselors being up to five times higher than enrollment. Nevertheless, a continuous effort must also be maintained to normalize seeking help to maintain mental health, especially for students who view mental health through a stigmatized lens.

Is Mental Health part of Diversity, Equity, and Inclusion?

Diversity, equity, and inclusion (DEI) and mental health issues are two subjects that have become prevalent in news stories, professional conference breakout sessions, and higher education best practices across many industries. While some people might consider these two topics distinct with no bearing on each other, research shows they are closely connected. For example, studies show that students' perceptions and experiences of campus climate directly impact their mental health (Hardeman et al., 2016; Leath et al., 2022; Leath et al., 2021). Notably, Hardeman et al. (2016) found that medical students showed that greater exposure to a negative diversity climate resulted in greater self-reported symptoms of depression. Conversely, research indicated that Black and LGBTQ+ students, along with students of low socioeconomic status, reported higher mental health well-being when the institution acknowledged and celebrated them through their diversity initiatives (Leath et al., 2022; Leath et al., 2021). Therefore, educators should be able to extend a positive campus environment in the classroom through DEI teaching in aviation education.

Coping with and Addressing Mental Health Through DEI Aviation Education

With the rapid changes the airline industry has faced in recent years, aviation educators need to adapt their curriculum to provide their students with courses that reflect current DEI practices. First, the researchers revised and received approval from their academic institution to update the learning outcomes of the Aeronautical Science undergraduate capstone to integrate current industry practices to include measuring DEI concepts. Some of the new learning outcomes are:

- Explain an entrenched pilot's professional, regulatory standards, and ethical expectations in today's industry.
- Analyze the importance of integrating diversity and inclusion practices in the aviation workforce.
- Evaluate the U.S. aviation industry's role in global aviation.

These changes to the learning outcomes were the results of the findings published by Albelo & O'Toole (2021), who argued that the three steps towards integrating DEI practices in aviation education are creating critical consciousness, recognizing implicit bias, and learning how to handle resistance while fostering a safe space for students to learn. The challenge was to create educational activities that would enable graduating students to experience a classroom atmosphere that permitted them to overcome ambivalence. The researchers realized that DEI initiatives in aviation higher education also extend to coping and addressing mental health in the classroom. Therefore, the researchers adopted a 4T approach: Talking, Teaching, Tools, and Taking Care lesson delivery method to integrate mental health and DEI teaching practices for aviation students.

Talking

Capturing the students' attention is essential in the learning process. Rosegard & Wilson (2013) found that the use of triggers and anticipatory sets enhances learning by increasing arousal and focusing attention. Therefore, the researchers framed the mental health lecture opening statement in a way that enabled the students to look constructively at their behaviors. The researchers asked the students what changes they felt needed to happen in order to improve their mental wellness and how they would go about making said changes. The first challenge noted by the researchers was overcoming the figure of power students see in professors. However, the practices to communicate respect outlined by De Cremer (2002) allowed the researchers to act compassionately and knowledgeably while respecting the students' autonomy in exercising self-direction.

While recognizing implicit bias and creating a critical consciousness atmosphere can be extremely challenging when discussing mental health in the classroom, the researchers found that the professor's role is to enable the students to explore the current positives and negatives of their behaviors without attempting to prove a point. In essence, through sympathy and respect, instructors can demonstrate sensitivity towards rational information and enable the formation of a practical point of view (De Cremer, 2002). The overarching goal before beginning the core of the lecture is to help the student recognize the difference between where they want to be and the changes and steps necessary to improve coping with their mental health.

Teaching

Since the goal is to help the student change their behavior to improve mental health without proving a point, the use of open-ended questions is ideal for teaching how to address mental health. Open-ended questions allow the professor to draw concerns, feelings, and ideas instead of merely suggesting them. Beyond seeking responses of "yes" or "no," aviation educators should strive to acknowledge the positives of building good self-esteem (French & Jones, 2019). Helping a student to build good self-esteem can be achieved simply by engaging in reflective listening. Reflective listening allows the professor to engage and respond to the students without projecting their worldviews and opinions onto the students.

As the professor guides the discussion to meet the learning objectives, when redirecting the students' statements and contributions, the faculty should reframe the students' statements

into more direct ones. Drageset (2014) supports that redirecting the students with direct statements enables the students to examine their thoughts and knowledge in a different light. The purpose of teaching how to cope with and address mental health issues in aviation education is to offer the students options to choose from, never forcing them to take a course of action. Handling resistance will be critical in this teaching stage as the professor's behavior will dictate how well the students are willing to accept their suggestions.

Tools

As the lesson on mental health evolves, incorporating different tools can enable both the professor and the students to learn from one another while ensuring confidentiality. For example, using Nearpod can be of significant value in addressing DEI topics. Nearpod is an interactive classroom tool that allows faculty to collect pools of information and foster collaboration boards while keeping the participants anonymous. In addition, students will find value in seeing that other peers might share their same concerns and problems. A poll given to the students who completed the mental health lesson showed that they felt better after knowing some of their peers are going through similar situations and that they have different options available to seek help without any punitive action. Other tools that professors could use are Buncee, Clogster, or Popplet. These tools allow students to organize their thoughts (collectively or independently) and express them freely with the rest of their peers.

Taking Care

Ensuring the classroom is a space for students to struggle is acceptable. One element that professors should support after allowing students to share their points of view without punitive action is to encourage a growth mindset. After a difficult dialogue, the professor should allow the students to take a mental break prior to any assessment activity (e.g., quiz, reflective assignment). A short mental break could allow students to interact with one another, stretch or engage in movement, and even practice breathing exercises. A short mental break will also encourage social connections. Some students will be compelled to connect with others who share similar experiences. Lastly, close each lecture with something positive; for example, have students share something they learned and why they perceived it as something useful for their careers.

Conclusion

Research has demonstrated that emotional intelligence is associated with a reduction in depression and anxiety diagnoses later in life. For instance, Guo et al. (2017) concluded that “it appears that a proactive coping enhancing training program in stress management might be practical and effective for pilots to prevent the onset of mental health problems.” Integrating and teaching DEI in aviation education can be a challenging yet rewarding experience for faculty and students. Creating an academic environment supportive of student mental health may include open and regular conversations about mental health, reframing what success looks like, and being intentional about course design. While the instructional practices used in the aviation classroom will vary by several factors (i.e., class size, time of day, subject matter taught, faculty personality), employing the 4 T's approach appears to alleviate student stress. Starting by talking

to the students can help identify if anyone is showing signs of self-doubt due to external pressures. The open dialogue reminds students that they do belong and are able to succeed. The teaching aspect of mental health subjects should be centered on the learning and mastery of the material instead of competition and performance. Consider building multiple ways for students to demonstrate that they have learned the content. There are many tools the professor can use to engage the students while assuring their confidentiality when sharing sensitive experiences. Lastly, as someone who cares about students and their well-being, professors should reaffirm the commitment of the institution's counselors and how putting the student's well-being first translates to their professional careers.

All in all, understand your students' background and developmental stage in their academic careers. Start by building awareness of what students may be experiencing in the classroom, increase empathy, and help build community. While a student's comfort level in disclosing may vary, let them know that you support them in getting the help they need.

Acknowledgments

This research was partially supported by the Embry-Riddle Aeronautical University Faculty Research Development Program. Also, special thanks to the University Aviation Association (UAA) committee for accepting our proposal for an educational session and inviting us to publish this conference proceeding.

References

- Abdu-Glass, E., Schlozman, S., & Beresin, G. (n.d.). *The college mental health crisis: A call for cultural change – part 2*. The Clay Center for Young Healthy Minds.
<https://www.mghclaycenter.org/parenting-concerns/college-mental-health-crisis-call-cultural-change-part-2/>
- Albelo, J. L. D., O’Toole, N. (2021). Teaching diversity, equity, and inclusion in aviation education. *Collegiate Aviation Review International*, 39(2), 266–273.
<https://ojs.library.okstate.edu/osu/index.php/CARI/article/view/8400/7689>
- American Psychological Association. (2022). Demographics of U.S. psychology workforce.
<https://www.apa.org/workforce/data-tools/demographics>
- Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., Demyttenaere, K., Ebert, D. D., Green, J. G., Hasking, P., Murray, E., Nock, M. K., Pinder-Amaker, S., Sampson, N. A., Stein, D. J., Vilagut, G., Zaslavsky, A. M. & Kessler, R. C. (2018). WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders. *Journal of Abnormal Psychology*, 127(7), 623–638.
<https://doi.org/10.1037/abn0000362>
- Bolton, D. H. (2020, October 29). DEI that ignores mental health is doomed.
<https://hrdailyadvisor.blr.com/2020/11/06/dei-that-ignores-mental-health-is-doomed/>
- Colarossi, J. (2022, April 21). *Mental health of college students is getting worse*. Boston University. <https://www.bu.edu/articles/2022/mental-health-of-college-students-is-getting-worse/>
- De Cremer, D. (2002). Respect and cooperation in social dilemmas: The importance of feeling included. *Personality and Social Psychology Bulletin*, 28(10). 1335-1341.
<https://doi.org/10.1177/014614702236830>
- Drageset, O. G. (2014). Redirecting, processing, and focusing actions – a framework for describing how teachers use students' comments to work with mathematics. *Educational Studies in Mathematics*, 85(2), 281–304. <https://doi.org/10.1007/s10649-013-9515-1>
- French, J., & Jones, L. (2019). Positive you: A self-advocate's arts-based approach for building self-esteem. *Disability & Society*, 34(2), 189–203.
<https://doi.org/10.1080/09687599.2018.1539649>
- Guo, Y., Ji, M., You, X., Huang, J. (2017) Protective Effects of Emotional Intelligence and Proactive Coping on Civil Pilots’ Mental Health, *Aerospace Medicine and Human Performance*, 88(9), 858-865. <https://doi.org/10.3357/AMHP.4799.2017>
- Hardeman, R. R., Przedworski, J. M., Burke, S., Burgess, D. J., Perry, S., Phelan, S., Dovidia, J. F., & van Ryn, M. (2016). Association between perceived medical school diversity climate and change in depressive symptoms among medical students: a report from the
<http://ojs.library.okstate.edu/osu/index.php/cari>

- medical student CHANGE study. *Journal of the National Medical Association*, 108(4), 225–235. <http://dx.doi.org/10.1016/j.jnma.2016.08.005>
- Leath, S., Butler-Barnes, S., Jones, M. K., & Ball, P. J. (2021). Linked fate among underrepresented groups: Investigating the relationships between Black college students' perceptions of institutional diversity climate and mental health. *Journal of American College Health*, 1–9. <https://doi.org/10.1080/07448481.2021.1924724>
- Leath, S. & Jones, M., (2022). Racial climate and mental health service utilization among black college students at diverse institutions. *Journal of Diversity Scholarship for Social Change*, 2(1). <https://doi.org/10.3998/ncidcurrents.1777>
- Lipson, Zhou, S., Abelson, S., Heinze, J., Jirsa, M., Morigney, J., Patterson, A., Singh, M., & Eisenberg, D. (2022). Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013–2021. *Journal of Affective Disorders*, 306, 138–147. <https://doi.org/10.1016/j.jad.2022.03.038>
- McKinsey & Company. (2021, March 1). Understanding organizational barriers to a more inclusive workplace. McKinsey & Company. <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/understanding-organizational-barriers-to-a-more-inclusive-workplace>
- Powell, A. (2019, September 19). *Feeling of alienation could account for higher rates of mental illness among minority students*. Harvard Gazette. <https://news.harvard.edu/gazette/story/2019/09/feeling-of-alienation-could-account-for-higher-rates-of-mental-illness-among-minority-students/>
- Rosegard, E., & Wilson, J. (2013). Capturing students' attention: An empirical study. *Journal of the Scholarship of Teaching and Learning*, 13(5). 1–20.
- Selmanoska, A. (2018, January 31). *The benefits of the Mental Health Continuum*. Safehouse. <https://safehouseapp.info/2018/01/16/the-benefits-of-the-mental-health-continuum/>
- Smith, T. B., & Trimble, J. E. (2016). Foundations of multicultural psychology: Research to inform effective practice. *American Psychological Association*.
- Staglin, G. (2021, December 10). *The Essential Role of mental health for a diverse, inclusive workplace*. Forbes. <https://www.forbes.com/sites/onemind/2020/07/14/the-essential-role-of-mental-health-for-a-diverse-inclusive-workplace/?sh=3b5895f8ac4d>
- World Health Organization. (2022, June 17). Mental health: Strengthening our response. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>